

Work Order ID 73909

Monday, September 19, 2011 8:15:35 AM



Page 1

Item ID: D2600-5-108

Accept



Setup Start



Revision ID:

Stop



Item Name: Extrusion 'I Beam' thin

Start Date: 9/19/2011 Start Qty: 90.00



Cust Item ID:

Required Date: 10/7/2011 Req'd Qty: 90.00



Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D2600	Rev D1								

100

0.00



PURCHASING

Purchasing

Memo

0.00

Purchasing

Issue P/O: 14937 ☐ a) Extrude as per Dwg D2600 ☐ b) Material: 6061-T6 (QQ-A-200/8) ☐ c) Minimum yield tensile strength = 35 ksi ☐ d) Minimum ultimate tensile strength = 40 ksi ☐ e) Minimum elongation = 8% ☐ f) Order at 108" long ☐ g) Caradon Indalex Tool # M

h 11.09.19

110

Receive & Inspect for Damage & Mat'l Certs

0.00



Packaging

Memo

0.00

Packaging

Ensure certification is attached

Pull 9/12 260

120

QC6- Inspect dimensions to drawing

0.00



QC

Memo

0.00

Quality Control

2-Check Pull test per Dwg D2600 for compliance page attached. 3-Check hardness with Webster tester

8/11/13

260

P10 →
[Signature]

W/O: 73909		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D2600-5-108 PAR #: N/A Fault Category: Eng. Assy. NCR: Yes No DQA: A Date: 11.10.18
 Resolution: use-as-in Disposition: use-as-in QA: N/C Closed Date: 11/10/18

NCR: 11-903		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
11.10.13	110	Dim 2.810 measures 2.768 2.670 measures 2.635 0.070 measures 0.068 <u>EC. Process</u>	<u>CP</u> 11.10.13 <u>PS/042</u>	SEE ATTACHED EMAIL & dwg. Acceptable dims are: 2.778 \pm 0.024 2.638 \pm 0.024 0.070 \pm 0.010 respectively Acceptable.	<u>CP</u> 11.10.13	<u>S</u> 11/10/13	<u>CP</u> 11.10.13 <u>PS/042</u>	<u>S</u> 11/10/13

NOTE: Date & initial all entries

No. D'OFFRE
PROPOSAL No. **M18871**

MS-18871

No. DE PROFILE / DIE NO.

Chris Provencal

From: Chris Provencal <cprovencal@dartaero.com>
Sent: Thursday, October 13, 2011 9:18 AM
To: 'Linda Lacelle'; 'Eric Downing'
Cc: Bill Beckett
Subject: RE: D2600-5 webs

We've always had the issue that our D-part dwgs don't match the Caradon die dwgs (ever since I've been here). Basically, considering the tolerance of the extrusion process, they changed some of the dims to ensure the parts will always fit. We corrected the dwg for D2500 last year, but never the D2600 extrusion.

Based on the D2600 die dwg, the dimension we've agreed to is 2.778+/-0.024. The pieces therefore are acceptable. I will provide a marked up dwg to inspect to for now, and I will have a CAR/PAR created to revise the D2600 dwg.

-Chris

From: Linda Lacelle [mailto:llacelle@dartaero.com]
Sent: Thursday, October 13, 2011 7:09 AM
To: 'Eric Downing'; 'Chris Provencal'
Subject: RE: D2600-5 webs

Chris, please come check them out asap...
Thx
Linda

From: Eric Downing [mailto:edowning@dartaero.com]
Sent: October-13-11 6:31 AM
To: Linda Lacelle; Chris Provencal
Subject: D2600-5 webs
Importance: High

Linda your webs are too small!

They should measure 2.810" they measure 2.768". should be 6.670" and they are 2.635" they rest are good.

Chris is this acceptable? Linda needs them to continue with the big order of D206 skids!

Eric Downing
QC COORDINATOR
DART AEROSPACE
EDOWNING@DARTAERO.COM

Work Order ID 73909

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Monday, September 19, 2011 8:15:35 AM

Item ID: D2600-5-108

Accept



Setup Start



Revision ID:

Stop



Item Name: Extrusion 'I Beam' thin

Start Date: 9/19/2011 Start Qty: 90.00



Cust Item ID:

Required Date: 10/7/2011 Req'd Qty: 90.00



Customer:

Reference:

Run Start



Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130 Packaging Packaging	Identify as per dwg & Stock Location: _____ Memo	0.00 0.00							
140 QC Quality Control	QC21- Final Inspection - Work Order Release Memo	0.00 0.00							

B 11-10-17

11/10/17

MF 11-10-17

Picklist Print

Monday, September 19, 2011 8:15:32 AM

Page 1

Work Order ID: 73909



Parent Item: D2600-5-108



Parent Item Name: Extrusion 'I Beam' thin



Start Date: 9/19/2011

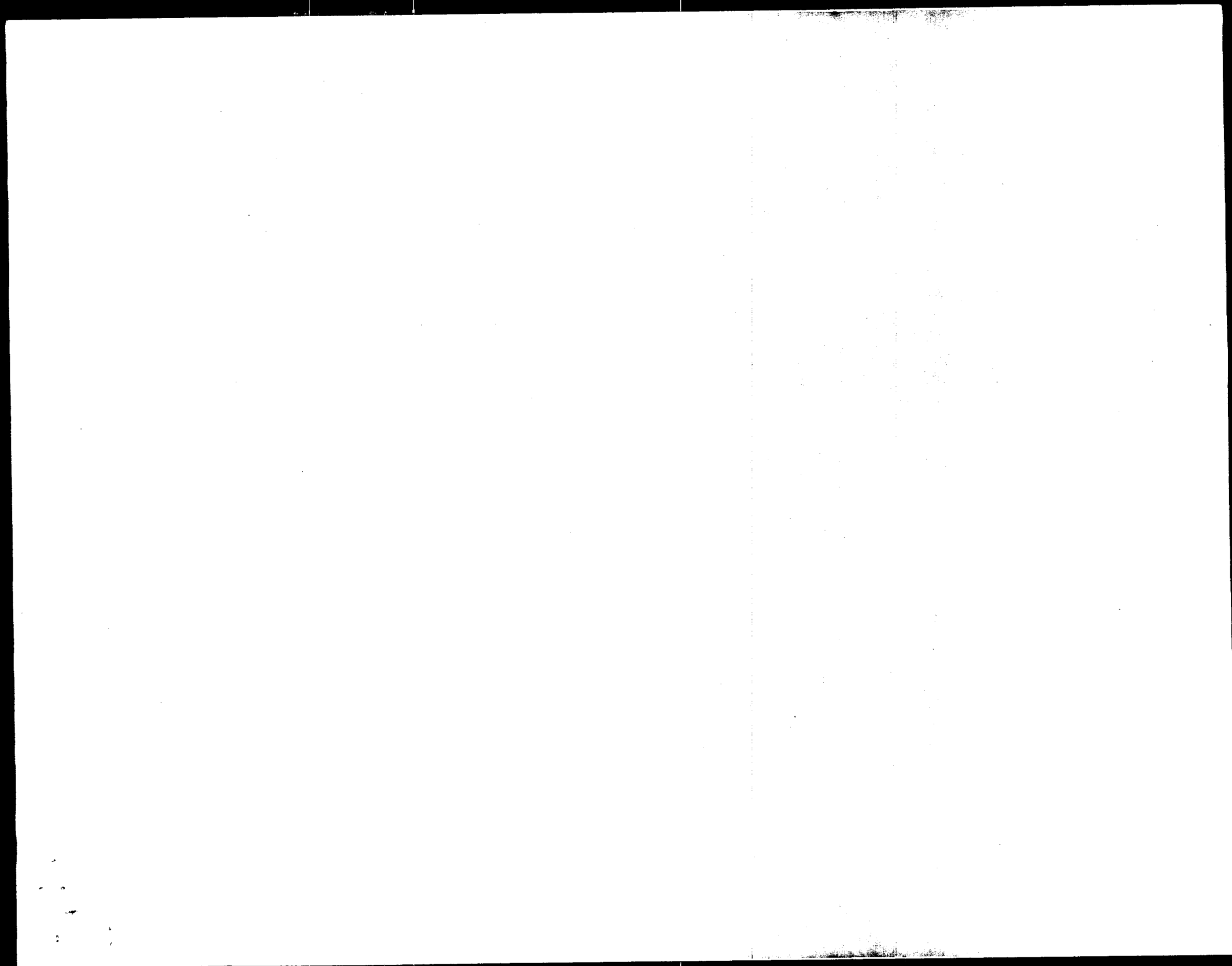
Required Date: 10/7/2011

Start Qty: 90.00

Required Qty: 90.00

Comments: IPP [F]02.09.10[]Added DSK 066[KJ/RF]

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D2600-5-108P  Extrusion 'I Beam' thin		Purchased	No			110	Each	0.0000	1 	90		9/10/12 (260)	





DESIGN <i>DAK</i>	DRAWN BY <i>DAK</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>KE</i>	APPROVED <i>AS</i>	DRAWING NO. D2600	REV. 0 SHEET 1 OF 5
DATE 98.08.20		TITLE EXTRUSION	SCALE 1:1
A	97.01.21	NEW ISSUE	
B	97.09.09	CHANGE MATERIAL SPEC.	
C	98.04.16	ADD D2600-3, UPDATE D2600-1 WIDTH, ADD DIE NO.	
D	98.08.20	INCREASE MIN. UTS TO 40 KSI	
DI	01.04.17	ADD PART NUMBERS + DIE NUMBERS <i>FGP</i>	

RELEASED
98.08.25 DS

GENERAL NOTES

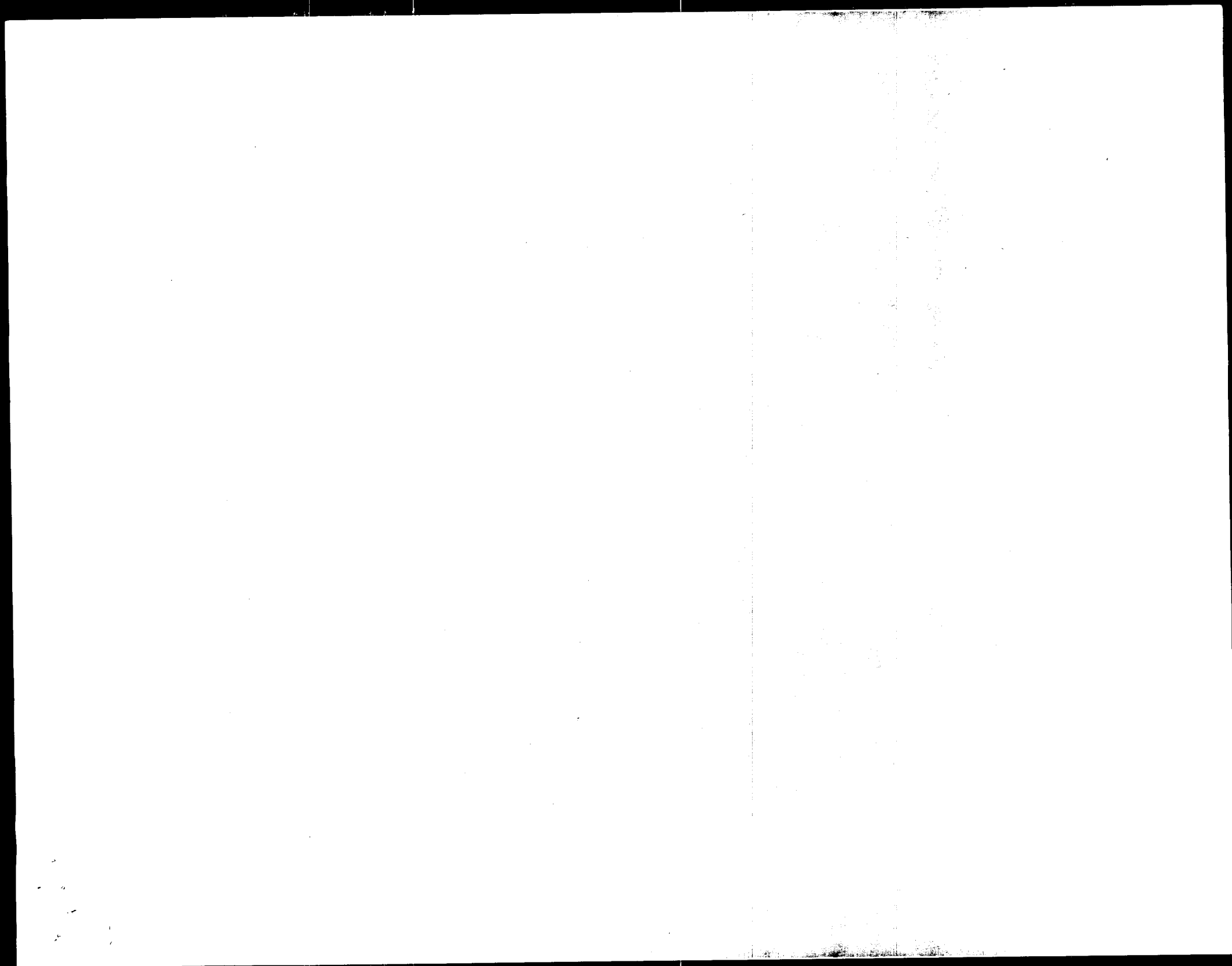
1. MATERIAL: 6061-T6 (QQ-A-200/8)

MINIMUM YIELD TENSILE STRENGTH = 35 ksi
MINIMUM ULTIMATE TENSILE STRENGTH = 40 ksi
MINIMUM ELONGATION = 8 %

A SAMPLE FROM EACH BATCH WILL BE PULL TESTED TO ASTM STANDARD B221 BY AN APPROVED TESTING FACILITY TO ENSURE THAT THE BATCH MEETS THE ABOVE MINIMUM MECHANICAL PROPERTIES.

2. BREAK ALL SHARP CORNERS 0.010 MAX.
3. NO TOOLING MARKS.
4. TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
5. ALL DIMENSIONS ARE IN INCHES.

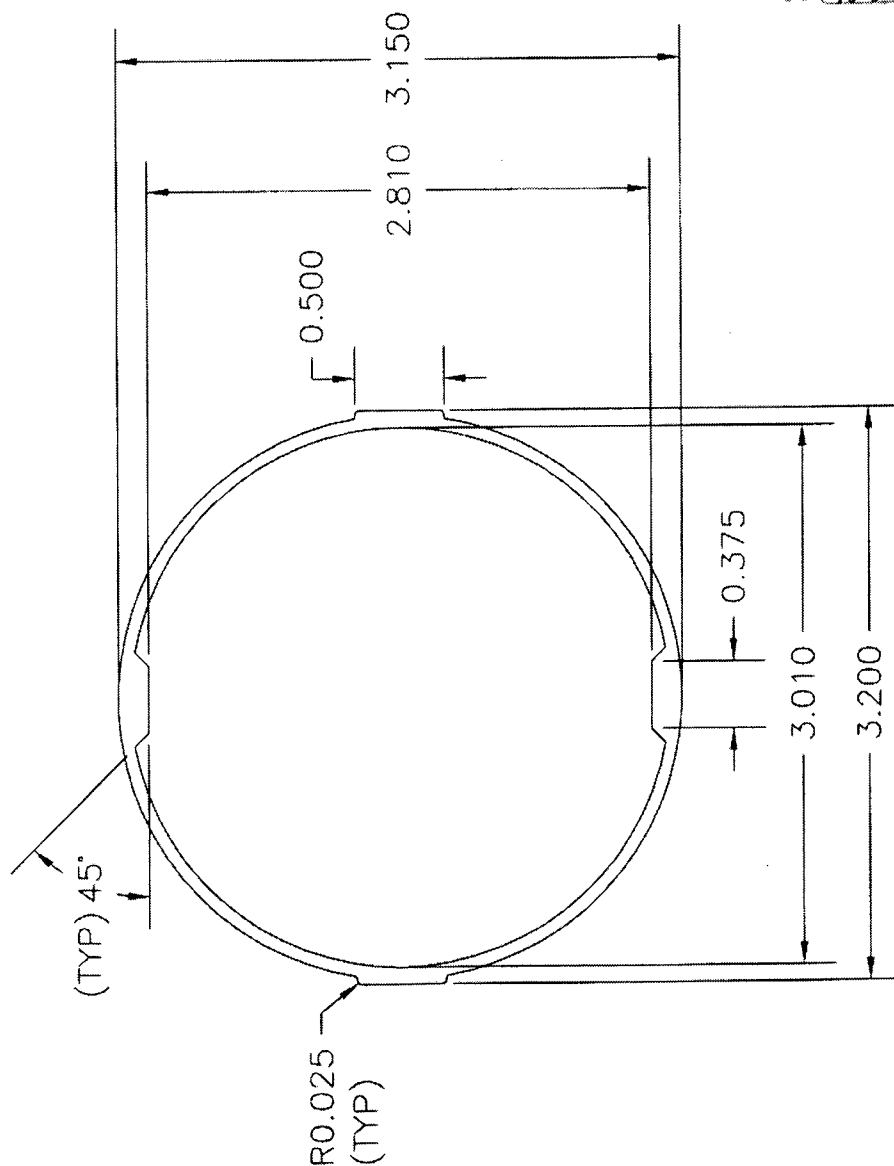
W/073909





DESIGN <i>DR</i>	DRAWN BY <i>DR</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>KE</i>	APPROVED <i>JP</i>	DRAWING NO. D2600	REV. D SHEET 2 OF 5
DATE 98.08.20		TITLE EXTRUSION	SCALE 1:1

RELEASED
98.8.25 DS



D2600-1

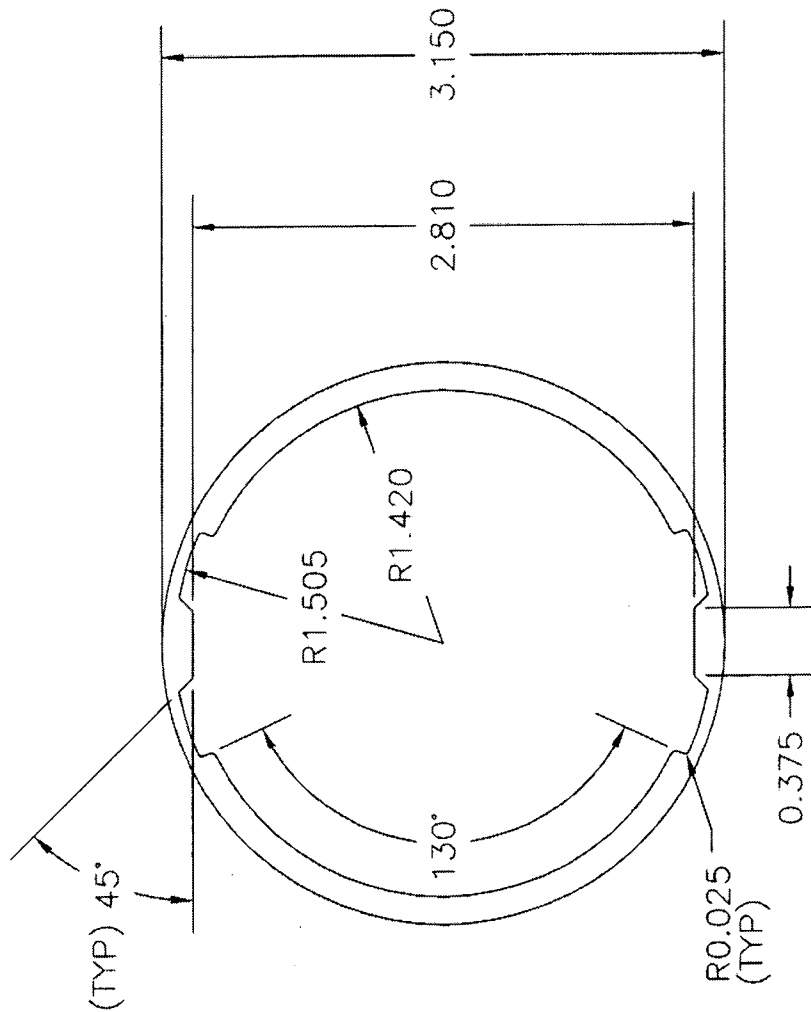
MANUFACTURED WITH CARADON INDALEX DIE # MH-18870
OR BON L DIE # 297121 (PREFERRED CHOICE)
PART NUMBER IS D2600-1-XXX WHERE XXX IS CUT LENGTH IN INCHES (EG. D2600-1-160 1' 16" LONG)





DESIGN <i>DM</i>	DRAWN BY <i>DM</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>KE</i>	APPROVED <i>JA</i>	DRAWING NO. D2600	REV. D SHEET 3 OF 5
DATE 98.08.20	TITLE EXTRUSION		SCALE 1:1

RELEASED
98.8.25 DS



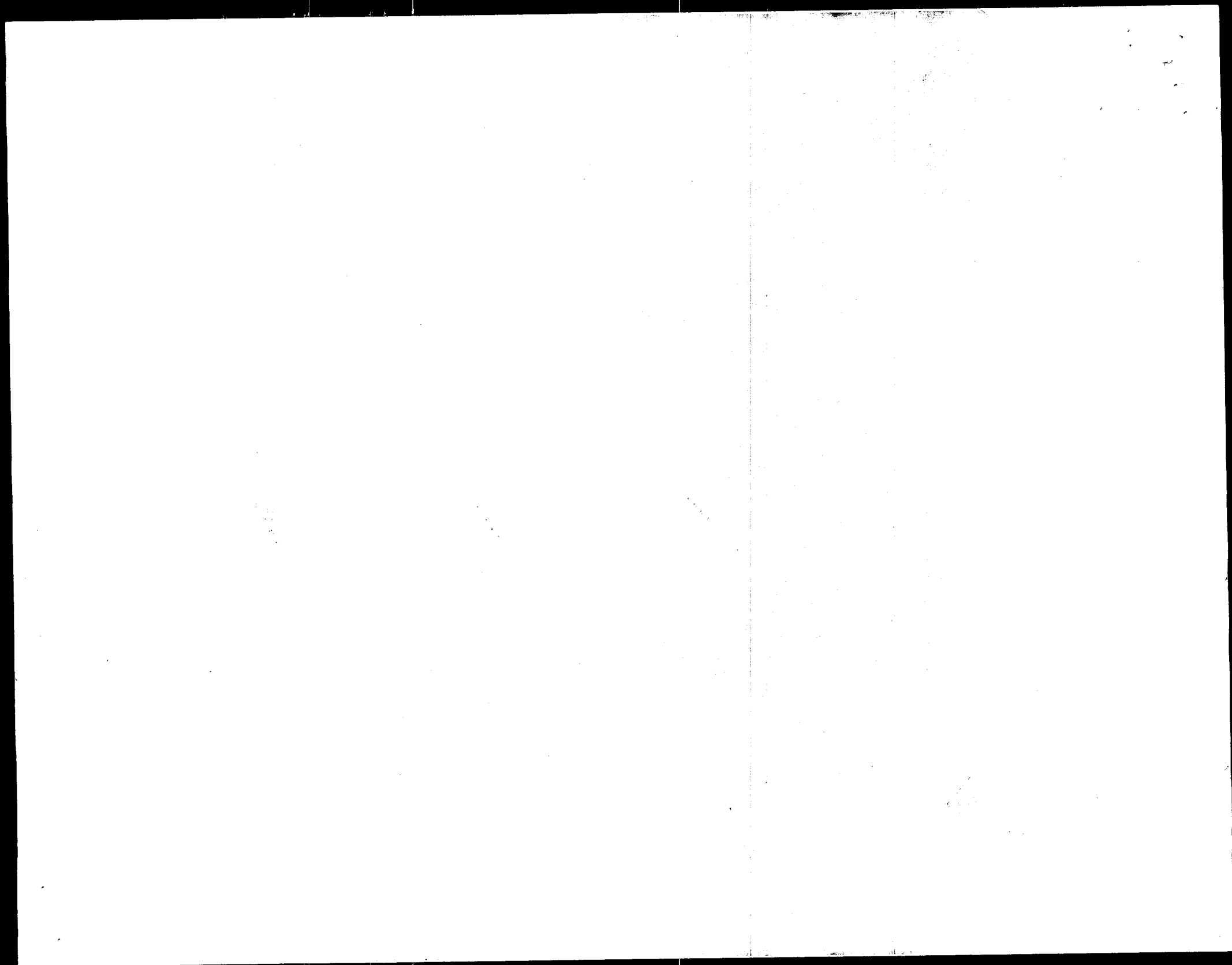
D2600-3

MANUFACTURED WITH CARADON INDALEX DIE # MH-18859

OR BOWL DIE # 897122 (PREFERRED CHOICE)

PART NUMBER IS D2600-3-XXX WHERE XXX IS CUT LENGTH IN INCHES (Eg. D2600-3-(20 IS 170" LONG)



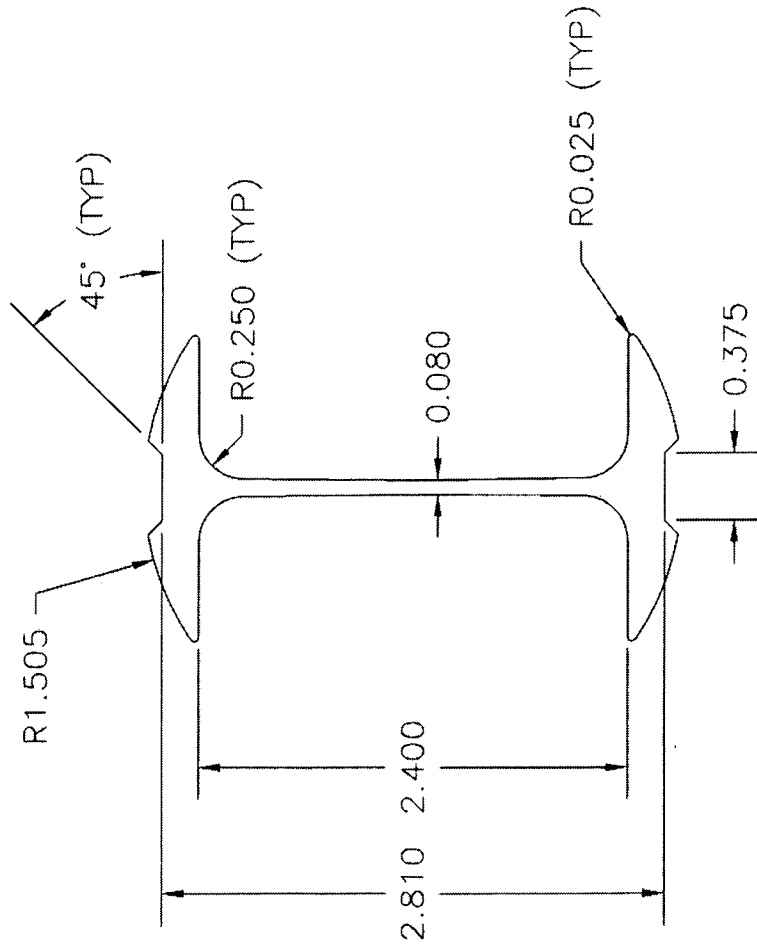






DESIGN <i>RA</i>	DRAWN BY <i>RA</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>KE</i>	APPROVED <i>AS</i>	DRAWING NO. D2600	REV. D SHEET 5 OF 5
DATE 98.08.20		TITLE EXTRUSION	SCALE 1:1

RELEASED
98.8.25 DS



D2600-7

MANUFACTURED WITH CARADON INDALOX DIE # MS-18872
PART NUMBER IS D2600-7-XXX WHERE XXX IS CUT LENGTH IN INCHES
(EG. D2600-7-125 IS 125" LONG)





Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID PO14937

Purchase Order Date 9/19/2011

PO Print Date 9/19/2011

Page Number 1 of 1

Order From :

VC-SAP001

SAPA CANADA INC
LOCKBOX B9427
PO BOX 9100
POSTAL STATION F
TORONTO, ONTARIO M4Y 3A5
CANADA

Contact Name		Buyer	Linda Lacelle
Vendor Phone	800 563 5120	Requisition Nbr	
Vendor Fax	800 563 8310	Tax Resale Nbr	10127-2607
Vendor Account Nbr		Terms	Net 30
		Currency	CAD
		FOB	Destination-Collect

Ship To : DART AEROSPACE LTD 1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

Line Nbr	Reference Revision ID Vendor Part Number	Description/ Mfg ID	Req Date/ Taxable	Req Qty/ Unit of Measure	Ship Method	Unit Price	Extended Price
1	D2600-5-108P	Extrusion 'I Beam' thin	10/10/2011 Yes	240.00 Each	Yours ppd	\$10.9400	\$2,625.60

Special Inst: EXTRUDE AS PER DRWG D2600 REV.D1
MATERIAL 6061-T6(QQ-A-200/8)
MINIMUM YIELD TENSILE
STRENGTH=35KSI
MINIMUM ULTIMATE TENSILE
STRENGTH=40KSI
MINIMUM ELONGATION=8%
108" LONG
CARADON TOOL # MS-18871

PO Total: \$2,625.60

Change Nbr: 1

Change Date: 9/19/2011

No substitution or deviation without
consent.
Certificate of Conformity or Material
Certification required when applicable

325 rue Avro
Pointe-à-Claire, QC, Canada H9R 5W3
Téléphone (514) 697-5120
Fac-simile (514) 694-8310

sapa

Rapport des propriétés mécaniques Mechanical Properties Test Report

Client / Customer : **DART AEROSPACE LTD**
Adresse / Address : **1270 ABERDEEN STREET
HAWKESBURY ONT,
K6A 1K7**

commande Sapa / Sapa order # : **1091264**

bon de commande / Purchase order # : **19092011**

de matrice / Die # : **MS 18871**

Description : **D-2600-5 LIGHT DUTY WEB**

Alliage & trempage / Alloy & temper : **6061 T6**

Customer Part # : **D2600-5**

Contrôle / Control # : **53389-1**

Coulée / Cast # : **52130**

	Min.requis Min.required	Résultat actuel Actual results
Tension ultime Ultimate stress (psi)	38 000	39,782
Contrainte élastique Yield stress (psi)	35 000	36,984
% élongation dans 2" % elongation in 2"	8	11
Dureté Rockwell E (hre) Rockwell E Hardness (hre)	88 @ 100	92

Composition chimique typique / Typical chemical composition :

	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti
6063	0,20 - 0,60	0,35 Max	0,10 Max	0,10 Max	0,45 - 0,90	0,10 Max	0,10 Max	0,10 Max
6005	0,60 - 0,90	0,35 Max	0,10 Max	0,10 Max	0,40 - 0,60	0,10 Max	0,10 Max	0,10 Max
6005A	0,68 - 0,72	0,15 - 0,27	0,08 - 0,12	0,20 - 0,24	0,48 - 0,52	0,03 Max	0,05 Max	0,03 Max
6061	0,40 - 0,80	0,70 Max	0,15 - 0,40	0,15 Max	0,80 - 1,20	0,04 - 0,35	0,25 Max	0,15 Max
6351	0,7 - 1,3	0,5 Max	0,10 Max	0,40 - 0,80	0,40 - 0,80	---	0,20 Max	0,20 Max

Nous certifions que le matériel fourni rencontre les exigences chimiques telles qu'annoncées par la norme ASTM B-221-08 excepté pour la section 8.2 (nombre de spécimen) .

We hereby certify that the material supplied meets the chemical properties as published by the ASTM B-221-08 except for section 8.2 (number of specimen) .

Sincèrement vôtre,
Yours truly,

date : **2011-09-28**



Gilles Pelletier
Technicien de la qualité
Quality technician